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NWS EARLE
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TRANSMITTAL LETTER FOR THE SITE INVESTIGATION REPORT FOR TANKS C-3/2, C-4,
C-9, C-16, C-21, C-31, R-2, R-5, R-10, R-15/1, R-15/2 AND R-22 NWS EARLE NJ
12/2/1994
ROY F. WESTON, INC.



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West Chester, Pennsylvania 19380-1499
® 610-701-3000 • Fax 610-701-3186

2 December 1994

Department of the Navy
Officer in Charge
NAVFAC Contracts
Naval Weapon Station Earle
Building C-23
Colts Neck, NJ 07722-5000

*2 COPIES
WITH
TO
J. D. DUNN
2 Dec 94*

Attention: Mr. T.E. Dunn

DCN: NWSE-1294-0114

Re: Contract No. N62472-92-C-0415
Underground Storage Tank Removal (Gas Conversion)
WPNSTA Earle, Colts Neck, NJ 07722-5025

Subject: Site Investigation Report for Tanks C-3/2, C-4, C-9, C-16, C-21, C-31, R-2, R-5, R-10, R-15/1, R-15/2, and R-22.

Dear Mr. Dunn,

Please find enclosed four copies of the Site Investigation Report prepared for Underground Storage Tanks C-3/2, C-4, C-9, C-16, C-21, C-31, R-2, R-5, R-10, R-15/1, R-15/2, and R-22 and a check for five hundred dollars made out to Treasurer State of New Jersey Revenue for the required fees for review of the report. Attached to the report are four (4) copies of the 12 completed NJDEP Underground Storage Tank Site Assessment Summary forms required for each tank site. Prior to submission to the NJDEP, each form must be signed under subheading IX, Certification by the Responsible Party(ies) of the Facility, Parts A and B, on page 5 (see tabbed pages). Upon completion of each form, the reports and check should be submitted to:

New Jersey Dept. Environmental Protection
Division of Responsible Parties - Site Remediation
Bureau of Federal Case Management - CNO28
Trenton, NJ 08625-0028
Attn: Bob Marcolina

Should you have any questions or concerns, please feel free to contact me at (610) 701-3022.

Very truly yours,

ROY F. WESTON, INC.

Steven A. Rock
Principal Project Manager

CC: Rick Leuser
DCN File





State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 02E
Trenton, NJ 08625-002E
Tel. # 609-984-3156
Fax. # 609-292-5604

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

UNDERGROUND STORAGE TANK
SITE ASSESSMENT SUMMARY

*Under the provisions of the Underground Storage
of Hazardous Substances Act
in accordance with N.J.A.C. 7:14B*

This Summary form shall be used by all owners and operators of Underground Storage Tank Systems (USTS) who have either reported a release and are subject to the site assessment requirements of N.J.A.C. 7:14B-8.2 or who have closed USTS pursuant to N.J.A.C. 7:14B-9.1 et seq. and are subject to the site assessment requirements of N.J.A.C. 7:14B-9.2 and 9.3.

INSTRUCTIONS:

- Please print legibly or type.
- Fill in all applicable blanks. This form will require various attachments in order to complete the Summary. The technical guidance document, Interim Closure Requirements for UST's, explains the regulatory (and technical) requirements for closure and the Scope of Work, Investigation and Corrective Action Requirements for Discharges from Underground Storage Tanks and Piping Systems explains the regulatory (and technical) requirements for corrective action.
- Return one original of the form and all required attachments to the above address.
- Attach a scaled site diagram of the subject facility which shows the information specified in Item IV B of this form.
- Explain any "No" or "N/A" response on a separate sheet.

Date of Submission _____

0151003
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

Naval Weapon Station Earle
Rt. 34
Colts Neck, NJ 07722 County Monmouth
Telephone No. (908) 866-7117 or 2674

OWNER'S NAME AND ADDRESS, if different from above

Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

A. Was contamination found? ☐ Yes ☒ No If Yes, Case No. _____
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) N/A

C. Have any vapor hazards been mitigated? ☐ Yes ☐ No ☒ N/A

III. DECOMMISSIONING OF TANK SYSTEMS

Closure Approval No. C94-0921

The site assessment requirements associated with tank decommissioning are explained in the Technical Guidance Document, Interim Closure Requirements for UST's, Section V. A-D. Attach complete documentation of the methods used and the results obtained for each of the steps of tank decommissioning used. Please include a site map which shows the locations of all samples and borings, the location of all tanks and piping runs at the facility at the beginning of the tank closure operation and annotated to differentiate the status of all tanks and piping (e.g., removed, abandoned, temporarily closed, etc.). The same site map can be used to document other parts of the site assessment requirements, if it is properly and legibly annotated. See attached Investigation Report

IV. SITE ASSESSMENT REQUIREMENTS

A. Excavated Soil

Any evidence of contamination in excavated soil will require that the soil be classified as either Hazardous Waste or Non-Hazardous Waste. Please include all required documentation of compliance with the requirements for handling contaminated excavated soil (if any was present) as explained in the technical guidance documents for closure and corrective action. Describe amount of soil removed, its classification and disposal location. See attached Investigation Report

B. Scaled Site Diagrams

1. Scaled site diagrams must be attached which include the following information:

See attached Investigation Report

- North arrow and scale
- The locations of the ground water monitoring wells
- Location and depth of each soil sample and boring
- All major surface and sub-surface structures and utilities
- Approximate property boundaries
- All existing or closed underground storage tank systems, including appurtenant piping
- A cross-sectional view indicating depth of tank, stratigraphy and location of water table
- Locations of surface water bodies

C. Soil samples and borings (check appropriate answer)

1. Were soil samples taken from the excavation as prescribed? ☒ Yes ☐ No ☐ N/A

2. Were soil borings taken at the tank system closure site as prescribed? ☐ Yes ☐ No ☒ N/A

3. Attach the analytical results in tabular form and include the following information about each sample

- Customer sample number (keyed to the site map)
- The depth of the soil sample
- Soil boring logs
- Method detection limit of the method used
- QA/QC information as required

See attached Investigation Report

D. Ground Water Monitoring

1. Number of ground water monitoring wells installed N/A
2. Attach the analytical results of the ground water samples in tabular form. Include the following information for each sample from each well:
 - a. Site diagram number for each well installed
 - b. Depth of ground water surface
 - c. Depth of screened interval
 - d. Method detection limit of the method used
 - e. Well logs
 - f. Well permit numbers
 - g. QA/QC Information as required

V. SOIL CONTAMINATION

- A. Was soil contamination found? ☐ Yes ☒ No

If "Yes", please answer Question B-E

If "No", please answer Question B

- B. The highest soil contamination still remaining in the ground has been determined to be
1. NA ppb total BTEX, NA ppb total non-targeted VOC
 2. NA ppb total B/N, NA ppb total non-targeted B/N
 3. 0 ppm TPHC
 4. NA ppb NA (for non-petroleum substance)

C. Remediation of free product contaminated soils

1. All free product contaminated soil on the property boundaries and above the water table are believed to have been removed from the subsurface ☒ Yes ☐ No
2. Free product contaminated soils are suspected to exist below the water table ☐ Yes ☒ No
3. Free product contaminated soils are suspected to exist off the property boundaries. ☐ Yes ☒ No

- D. Was the vertical and horizontal extent of contamination determined? ☒ Yes ☐ No ☐ N/A

- E. Does soil contamination intersect ground water? ☐ Yes ☒ No ☐ N/A

VI. GROUND WATER CONTAMINATION

- A. Was ground water contamination found? ☐ Yes ☒ No

If "Yes", please answer Questions B-G.

If "No", please answer only Question B.

- B. The highest ground water contamination at any 1 sampling location and at any 1 sampling event to date has been determined to be:

1. _____ ppb total BTEX, _____ ppb total non-targeted VOC
2. _____ ppb total B/N, _____ ppb total non-targeted B/N
3. _____ ppb total MTBE, _____ ppb total TBA
4. _____ ppb _____ (for non-petroleum substance)
5. greatest thickness of separate phase product found _____
6. separate phase product has been delineated ☐ Yes ☐ No ☐ N/A

C. Result(s) of well search

1. A well search (including a review of manual well records) indicates that private, municipal or commercial wells do exist within the distances specified in the Scope of Work. ☐ Yes ☐ No ☐ N/A
2. The number of these wells identified is _____.

D. Proximity of wells and contaminant plume

1. The shallowest depth of any well noted in the well search which may be in the horizontal or vertical potential path(s) of the contaminant plume(s) is _____ feet below grade (consideration has been given for the effects of pumping, subsurface structures, etc. on the direction(s) of contaminant migration). This well is _____ feet from the source and its screening begins at a depth of _____ feet.
2. The shallowest depth to the top of the well screen for any well in the potential path of the plume(s) (as described in D1 above) is _____ feet below grade. This well is located _____ feet from the source
3. The closest horizontal distance of a private, commercial or municipal well in the potential path of the plume (as determined in D1) is _____ feet from the source. This well is _____ feet deep and screening begins at a depth of _____ feet.

E. A plan for separate phase product recovery has been included. ☐ Yes ☐ No ☐ N/A

F. A ground water contour map has been submitted which includes the ground water elevations for each well.
☐ Yes ☐ No ☐ N/A

G. Delineation of contamination

1. The ground water contaminants have been delineated to MCLs or lower values at the property boundaries. ☐ Yes ☐ No
2. The plume is suspected to continue off the property at concentrations greater than MCLs.
☐ Yes ☐ No
3. Off property access (circle one): ☐ is being sought ☐ has been approved ☐ has been denied

VII. SITE ASSESSMENT CERTIFICATION [preparer of site assessment plan - N.J.A.C. 7:14B-8.3(b) & 9.5(a)3]

The person signing this certification as the "Qualified Ground Water Consultant" (as defined in N.J.A.C. 7:14B-1.6) responsible for the design and implementation of the site assessment plan as specified in N.J.A.C. 7:14B-8.3(a) & 9.2(b)2, must supply the name of the certifying organization and certification number.

"I certify under penalty of law that the information provided in this document is true, accurate, and complete and was obtained by procedures in compliance with N.J.A.C. 7:14B-8 and 9. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) Richard M. Leuser

SIGNATURE 

COMPANY NAME Roy F. Weston, Inc.

DATE 12/2/94

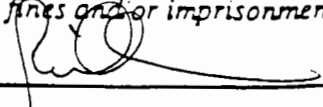
(Preparer of Site Assessment Plan)

CERTIFYING
ORGANIZATION NJDEP

CERTIFICATION
NUMBER E0000457

VIII. TANK DECOMMISSIONING CERTIFICATION [person performing tank decommissioning portion of closure plan - N.J.A.C. 7:14B-9.5(a)4]

"I certify under penalty of law that tank decommissioning activities were performed in compliance with N.J.A.C. 7:14B-9.2(b)3. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) Richard M. Leuser SIGNATURE 
COMPANY NAME Roy F. Weston, Inc. DATE 12/2/94
(Performer of Tank Decommissioning)

IX. CERTIFICATIONS BY THE RESPONSIBLE PARTY(IES) OF THE FACILITY

- A. The following certification shall be signed by the highest ranking individual with overall responsibility for that facility [N.J.A.C. 7:14B-2.3(c)11].

"I certify under penalty of law that the information provided in this document is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____
COMPANY NAME _____ DATE _____

- B. The following certification shall be signed as follows [according to the requirements of N.J.A.C. 7:14B-2.3(C)21]:

1. For a corporation, by a principal executive officer of at least the level of vice president.
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency by either the principal executive officer or ranking elected official.
4. In cases where the highest ranking corporate partnership, governmental officer or official at the facility as required in A above is the same person as the official required to certify in B, only the certification in A need to be made. In all other cases, the certifications of A and B shall be made.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____
COMPANY NAME _____ DATE _____

State of New Jersey
Dept. of Environmental Protection and Energy

UNDERGROUND STORAGE TANK
SITE ASSESSMENT SUMMARY

The following are responses to all N/A and "no" answers on the state form for:

Tank R-10, Naval Weapon Station Earle

- II. A. No soil contamination above state guidelines was identified at the site for Tank R-10.
- C. No vapor hazards were associated with the site for Tank R-10.
- IV. C. 2. Soil sampling was completed as required by state regulations and guidelines. Soil borings are not required.
- D. 1. Groundwater monitoring wells are not required for No. 2 fuel oil tanks.
- V. A. No soil contamination was identified in the soils remaining in the excavation for Tank R-10.
- B. 1. No analysis for total BTEX or total non-targeted VOC were performed since no concentrations of TPHC above 1,000 mg/kg (ppm) were identified in the soils remaining in the excavation for Tank R-10.
- B. 2. No analysis for total B/N or total non-targeted B/N were performed since they are not required by the state for No. 2 fuel oil tanks.
- B. 4. No analysis for non-petroleum substances were performed since they are not required by the state for No. 2 fuel oil tanks.
- C. 2. The vertical and horizontal extent of soil contamination was identified and was not found to intersect groundwater.
- C. 3. All identified soil contamination is within the boundaries of Naval Weapon Station Earle.
- E. The vertical and horizontal extent of soil contamination was identified and was not found to intersect groundwater.
- VI. A. Groundwater samples were not collected.



Photograph No. 17: Tank R-10 being excavated.



Photograph No. 18: Tank R-10 being removed from the excavation.

is presented in Table 3-9. A copy of the full analytical data package is provided in Appendix D.

Laboratory results for the post-excavation samples indicated the presence of TPHC in concentrations ranging from 130 mg/kg to 6,400 mg/kg. Since two samples (R-5-1 and R-5-4) had a concentration of TPHC greater than 1,000 mg/kg, analysis for VO + 10 was required for those samples.

Analytical results for VO + 10 indicated the presence of methylene chloride (0.35 mg/kg) in sample R-5-1 at a concentration less than Impact to Ground Water Soil Cleanup Criteria. Four TICs were identified in the sample at concentrations ranging from 0.92 mg/kg to 6.38 mg/kg. The total concentration of VO + 10 in the soil sample was 11.41 mg/kg, less than the criteria of 1,000 mg/kg. The total organic concentration was 1.411 mg/kg, less than the 10,000 mg/kg limit.

Analytical results for VO + 10 indicated the presence of methylene chloride (0.35 mg/kg) and xylene (0.07J) in sample R-5-4 at a concentrations less than Impact to Ground Water Soil Cleanup Criteria. Two TICs were identified in the sample at concentrations of 1.38 mg/kg to 7.46 mg/kg. The total concentration of VO + 10 in the soil sample was 9.30 mg/kg, less than the criteria of 1,000 mg/kg. The total organic concentration was 1,409 mg/kg, less than the 10,000 mg/kg limit.

The sample collected from the excavated soils (R-5-Pile1) indicated the presence of TPHC at a concentration of 6,400 mg/kg. Since the concentration was greater than 1,000 mg/kg, VO + 10 analysis was performed on this sample. The total concentration of VO + 10 in the soil sample was 9.32 mg/kg and the total organic concentration was 6,409 mg/kg. Results for the sample indicates that the excavated soil could not be reused on site as fill, but should be disposed of as non-hazardous material.

3.1.9 Tank R-10

A total of four post-excavation soil samples (R-10-1 through R-10-4) were collected from the excavation for Tank R-10. Two additional soil samples (R-10-Pile and R-10-Pile2) were collected from the staged excavated soil piles, for waste characterization purposes. A summary of analytical results for these samples is presented in Table 3-8. A copy of the full analytical data package is provided in Appendix D.

Laboratory analysis of the post-excavation samples indicated no presence of TPHC. Since no concentrations of TPHC were detected in the post-excavation samples, VO + 10 analysis was not required. TPHC was not detected in the field blank sample.

The TPHC concentration in both excavated soil samples (R-10-Pile and R-10-Pile2) were 520 mg/kg and 460mg/kg, respectively. These result indicated that the excavated soil could not be reused on site as fill, but would be disposed of as non-hazardous material.

from 130 mg/kg to 1,400 mg/kg. Two soil samples were analyzed for VO + 10. Two target VO + 10 compounds were detected at a concentrations below their NJDEP Impact to Ground Water Soil Cleanup Criteria. The total volatile organic concentration for these samples were below the 1,000 mg/kg limit, while the total organic concentration in all samples was below the 10,000 mg/kg limit.

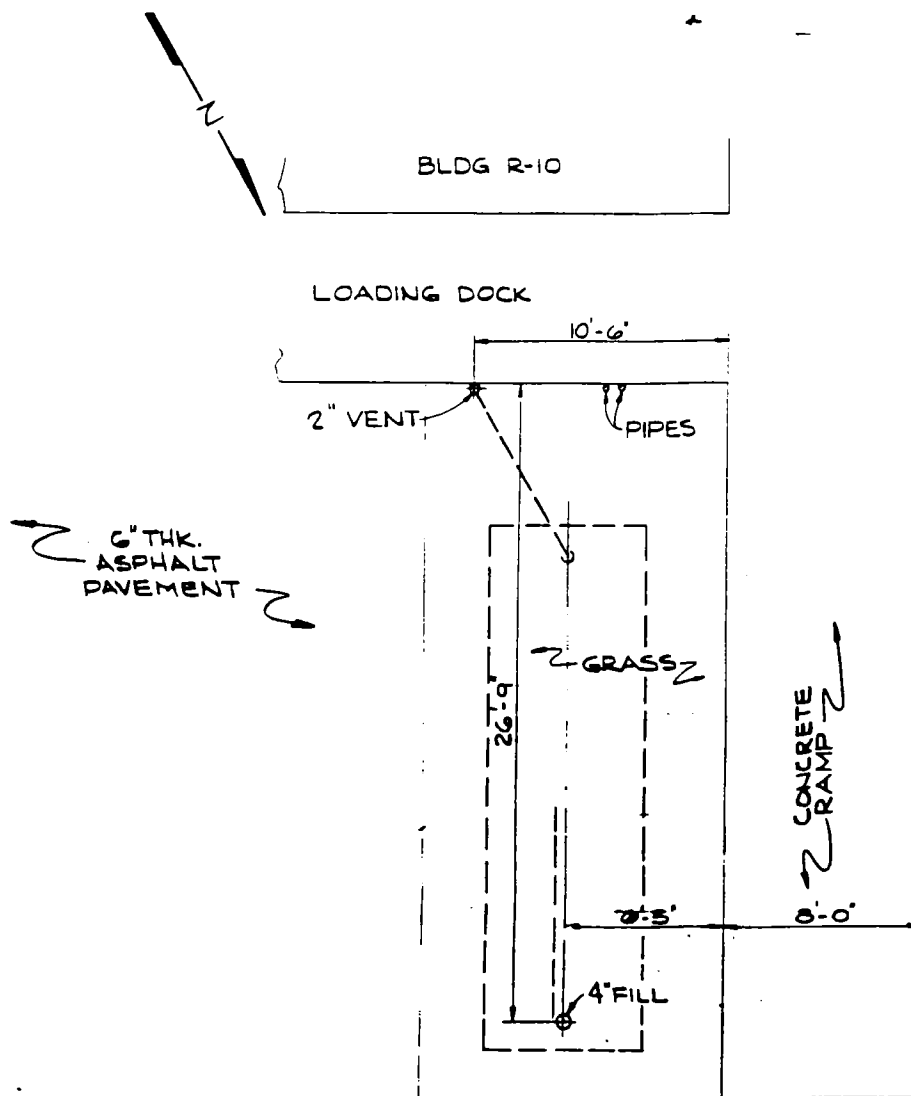
- Tank R-10 - Five post-excavation soil samples were collected and analyzed for TPHC. TPHC was not detected in any sample collected from the Tank R-10 excavation at reporting limits ranging from 59 mg/kg to 61 mg/kg.
- Tank R-15/1 - Seven post-excavation soil samples were collected and analyzed for TPHC. The results indicated the presence of TPHC at concentrations ranging from not detectable at 57 mg/kg to 8,400 mg/kg. Four soil samples were analyzed for VO + 10. One target VO + 10 compound was detected at a concentrations above its NJDEP Impact to Ground Water Soil Cleanup Criteria (methylene chloride, 1.6 mg/kg). The total volatile organic concentration in all samples analyzed for VO + 10 was below the 1,000 mg/kg limit, while the total organic concentration in all samples was below the 10,000 mg/kg limit.
- Tank R-15/2 - Eight post-excavation soil samples were collected and analyzed for TPHC. The results indicated the presence of TPHC at concentrations ranging from not detectable at 56 mg/kg to 20,000 mg/kg. Five soil samples were analyzed for VO + 10. Three target VO + 10 compounds were detected at concentrations ranging from 0.51J to 4.2J. Two samples had methylene chloride detected at a concentrations above its NJDEP Impact to Ground Water Soil Cleanup Criteria. The total volatile organic concentration in all samples analyzed for VO + 10 was below the 1,000 mg/kg limit. The total organic concentration in two samples exceeded the 10,000 mg/kg limit (10,110 mg/kg and 20,157 mg/kg).
- Tank R-22 - Four post-excavation soil samples were collected and analyzed for TPHC. The results indicated the presence of TPHC at concentrations ranging from not detectable at 54 mg/kg to 66 mg/kg. Since all concentrations were less than 1,000 mg/kg, VO + 10 analysis was not required on these samples. All concentrations of TPHC were below the 10,000 mg/kg limit for total organic compounds.

In summary, a product sheen was observed on the groundwater in the excavations for Tanks C-9 and C-31. In addition, the presence of methylene chloride above NJDEP Ground Water Soil Cleanup Criteria and excessively high TPHC concentrations were detected in the soils collected at Site R-15/1 and R-15/2.

4.2 RECOMMENDATIONS

Based on the findings of the site investigation, the following recommendations are made:

- Tank C-3/2 - No further action.
- Tank C-4 - No further action.
- Tank C-9 - Further investigation, including the installation and sampling of groundwater monitoring wells, be performed.
- Tank C-16 - No further action.
- Tank C-21 - No further action.
- Tank C-31 - Further investigation, including the installation and sampling of groundwater monitoring wells, be performed.
- Tank R-2 - No further action.
- Tank R-5 - No further action.
- Tank R-10 - No further action.
- Tank R-15/1 - Further investigation, including the installation and sampling of groundwater monitoring wells, be performed.
- Tank R-15/2 - Further investigation, including the installation and sampling of groundwater monitoring wells, be performed.
- Tank R-22 - No further action.



PLAN-BUILDING R-10

SCALE: 1/4"=1'-0"

FUEL OIL TANK REMOVAL

5000 GAL.

REVISION #1: DATE: PLOT NAME: WESTON MANAGERS DESIGNERS/CONSULTANTS

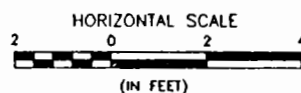
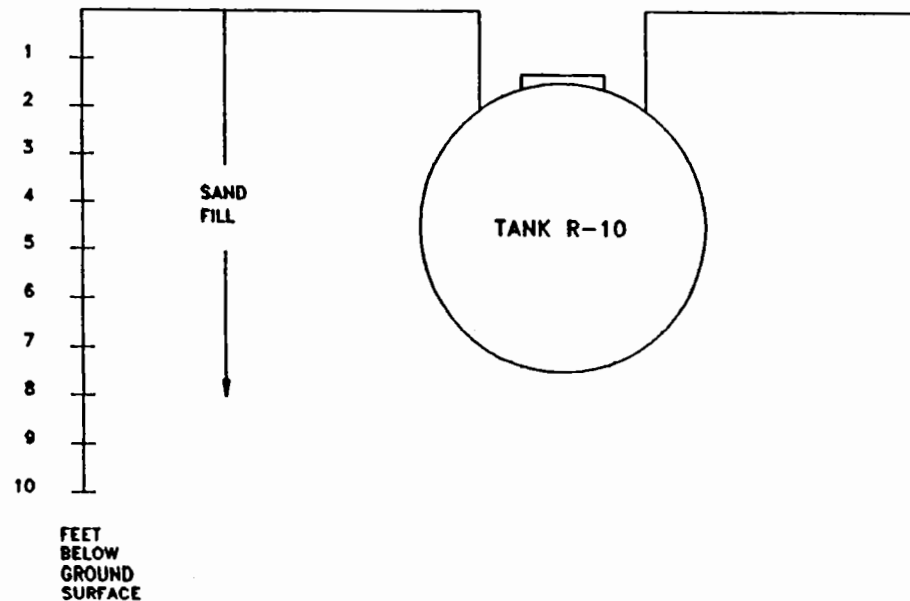
WESTON
MANAGERS DESIGNERS/CONSULTANTS

PROJECT NAME: UNDERGROUND STORAGE TANK CLOSURES
NAVAL WEAPON STATION EARLE
COLTS NECK, NEW JERSEY
CLIENT NAME: DEPARTMENT OF THE NAVY
NAVFAC CONTRACTS

SAMPLE LOCATION MAP
TANK R-10

DATE: NOVEMBER 1994

FIGURE #: 2-9



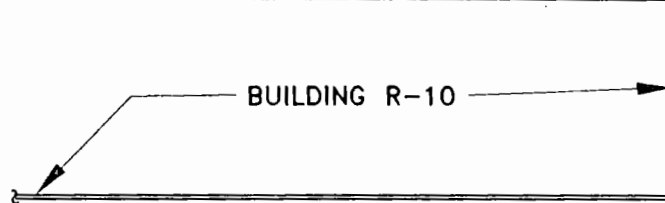
PROJECT NAME:
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NAVAL WEAPON STATION EARLE
COLTS NECK, NEW JERSEY
COLTS NECK, NEW JERSEY
CLIENT NAME: DEPARTMENT OF THE NAVY
NAVFAC CONTRACTS

SUBSURFACE CROSS SECTION TANK R-10

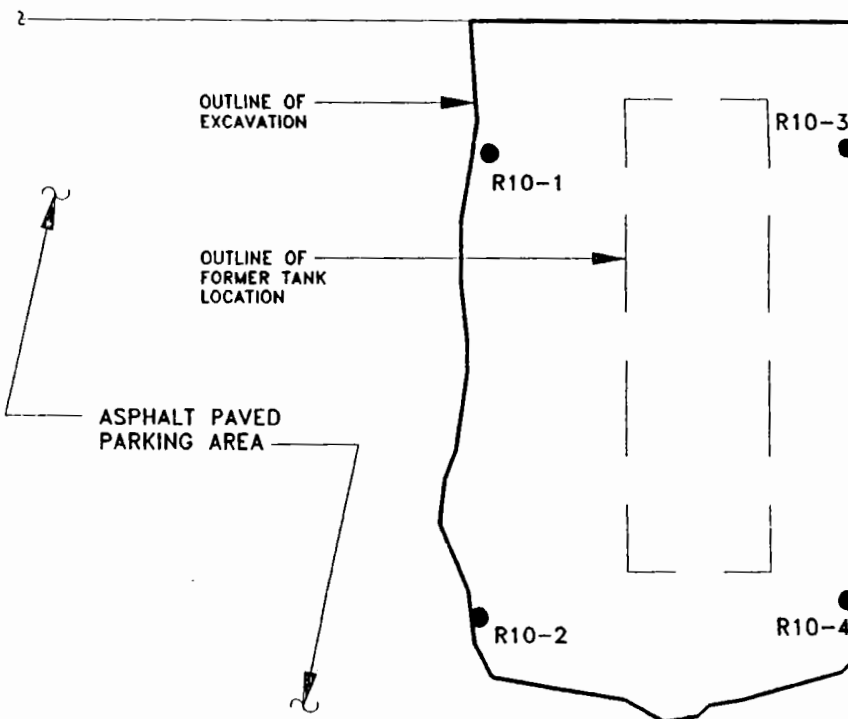
DATE:
NOVEMBER 1994

FIGURE #:
2-21

REVISION # DATE: FILE NAME: SUBSURFACE CROSS SECTION BY: DRAWN BY:



CONCRETE PLATFORM



CONCRETE RAMP

KEY

● SAMPLE LOCATION



GRAPHIC SCALE



MANAGERS DESIGNERS/CONSULTANTS

PROJECT NAME:
UNDERGROUND STORAGE TANK CLOSURES
NAVAL WEAPON STATION EARLE
COLTS NECK, NEW JERSEY
COLTS NECK, NEW JERSEY
CLIENT NAME: DEPARTMENT OF THE NAVY
NAVFAC CONTRACTS

SITE LOCATION MAP
TANK R-10

DATE: NOVEMBER 1994

FIGURE #: 2-33

REVISION / DATE: 11/1/94
FILE NAME: S:\PROJECTS\NAVFAC\TANK R-10.DWG
DRAWN BY: J. L. BROWN

TABLE 3-10

SUMMARY OF POST-EXCAVATION ANALYTICAL DATA FOR TANK R-10
 NAVAL WEAPONS STATION EARLE
 COLTS NECK, NEW JERSEY

Sample ID No.	R-10-1	R-10-2	R-10-3	R-10-4	R-10-Pile	R-10-Pile2	R-10-FB	NJDEPE Impact to Ground Water Soil Cleanup Criteria
Laboratory ID No.	T409143-2	T409143-3	T409143-4	T409143-5	T409143-7	T409143-6	T409143-1	
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Water	
Depth (Feet BGS)	9.5'	9.5'	9.5'	9.5'	N/A	N/A	N/A	
Analytical Parameters	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/l	
Total Petroleum Hydrocarbons (TPHC)								
TPHC	61U	61U	60U	59U	520	460	500U	NLE
Volatile Organic Compounds (VO + 10)								
Targeted VO	NR	NR	NR	NR	NR	NR	NLE	---
Total Organics	61U	61U	60U	59U	520	460	500U	10,000

N/A - Not applicable

U - Not detected at quantitation limit specified

NR - Analysis not required

NLE - No limit established

Sample R-10-Pile and R-10-Pile2 were collected from excavated soil. Their results do not effect compliance with Soil Cleanup Criteria.